M. Bradner

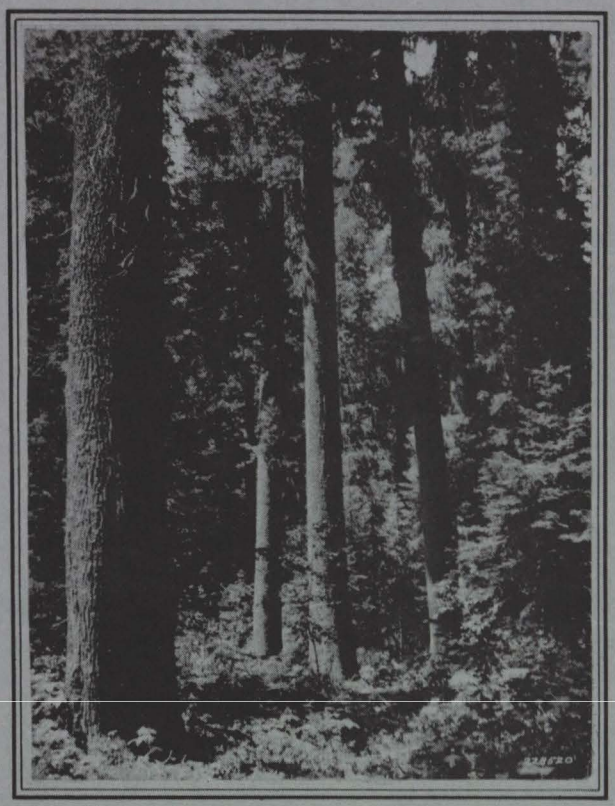
Central File
No. 0.73 7.14

FOREST SURVEY RELEASE NO. 8 A SEPTEMBER 1937 PROGRESS REPORT

STN PUB
NRM
FSR
no. 8

FOREST STATISTICS
BENEWAH COUNTY, IDAHO

FROM THE INVENTORY PHASE OF THE FOREST SURVEY



U. S. DEPARTMENT OF AGRICULTURE FOREST SERVICE

NORTHERN ROCKY MOUNTAIN
FOREST AND RANGE EXPERIMENT STATION

STEPHEN N. WYCKOFF DIRECTOR
MISSOULA MONTANA

BY FOREST SURVEY STAFF M. BRADNER REGIONAL DIRECTOR

Glossary

NONFOREST LAND TYPES

Townsites - includes both incorporated and unincorporated urban settlements.

Cultivated - areas cleared and/or cultivated for agricultural use, including pasture.

Stump pasture - logged off or burned off lands, part of operating farm units, now chiefly devoted to grazing and from which stumps or snags have not been removed.

Barrens - areas too rocky, too scanty as to soil, or too exposed, to support a vegetative cover of either trees, shrubs, or herbs.

Grass - areas such as parks, mountain meadows, or treeless ridges, whose principal vegetation is grass and herbs.

Brush - areas whose principal vegetation is sagebrush, brush, or shrubs as a permanent type.

FOREST LAND TYPES

Timberland - forest areas capable of producing trees of commercial species and quality.

Producing timberland - timberland areas containing forest growth, or if not, which have been denuded since 1925.

Deforested timberland - nonrestocked old burns or cut-overs denuded prior to 1925.

Subalpine - stands above the altitude range of merchantability.

Rocky noncommercial - areas too steep, sterile, or rocky to produce merchantable timber.

Sawlog stands - timber stands containing 3 thousand board feet per acre for the ponderosa pine and lodgepole pine types or 4 thousand board feet for the other types, except cottonwood, in trees of sawlog size. The cottonwood type has no minimum limit. The minimum size classes for sawlog trees are: white pine, ponderosa pine, lodgepole pine - 12 inches, cedar - 24 inches, and other species - 14 inches (diameter breast high).

Merchantable pole stands. - cedar or cedar-white fir stands containing 8 or more commercial cedar poles to the acre (12 to 24 inches diameter breast high).

Other pole stands. - timber stands in which the majority of the dominant trees are between 6 inches and merchantable size.

Seedling or sapling stands. - timber stands in which the majority of the dominant trees are less than 6 inches.

Recent burns and cut-overs. - areas cut or burned since 1925 for which sufficient time has not elapsed to allow classification into one of the other timber types.

Reserved areas. - includes publicly owned forest lands not available for conversion into timber products but reserved for parks, primitive areas, protection of municipal watersheds, etc.

Zones. - Zone One includes areas loggable under present conditions.

Zone two includes areas loggable with increased stumpage values.

Zone Three includes areas of no probable value for timber production.

Site class. - the index of the productivity of an area for growing forests. There are 5 or 6 site classes with the best sites numbered one, the next best two, etc.

Stocking. - in young timber stands stocking is the measure of the extent to which an area is covered with forest growth. The degrees of stocking are:

Less than 10 percent stocked	= unstocked
10 to 39 percent stocked	= poorly stocked
40 to 69 percent stocked	= medium stocked
70 to 100 percent stocked	= well stocked

FOREST STATISTICS FOR BENEWAH COUNTY, IDAHO

From the Inventory Phase of the Forest Survey

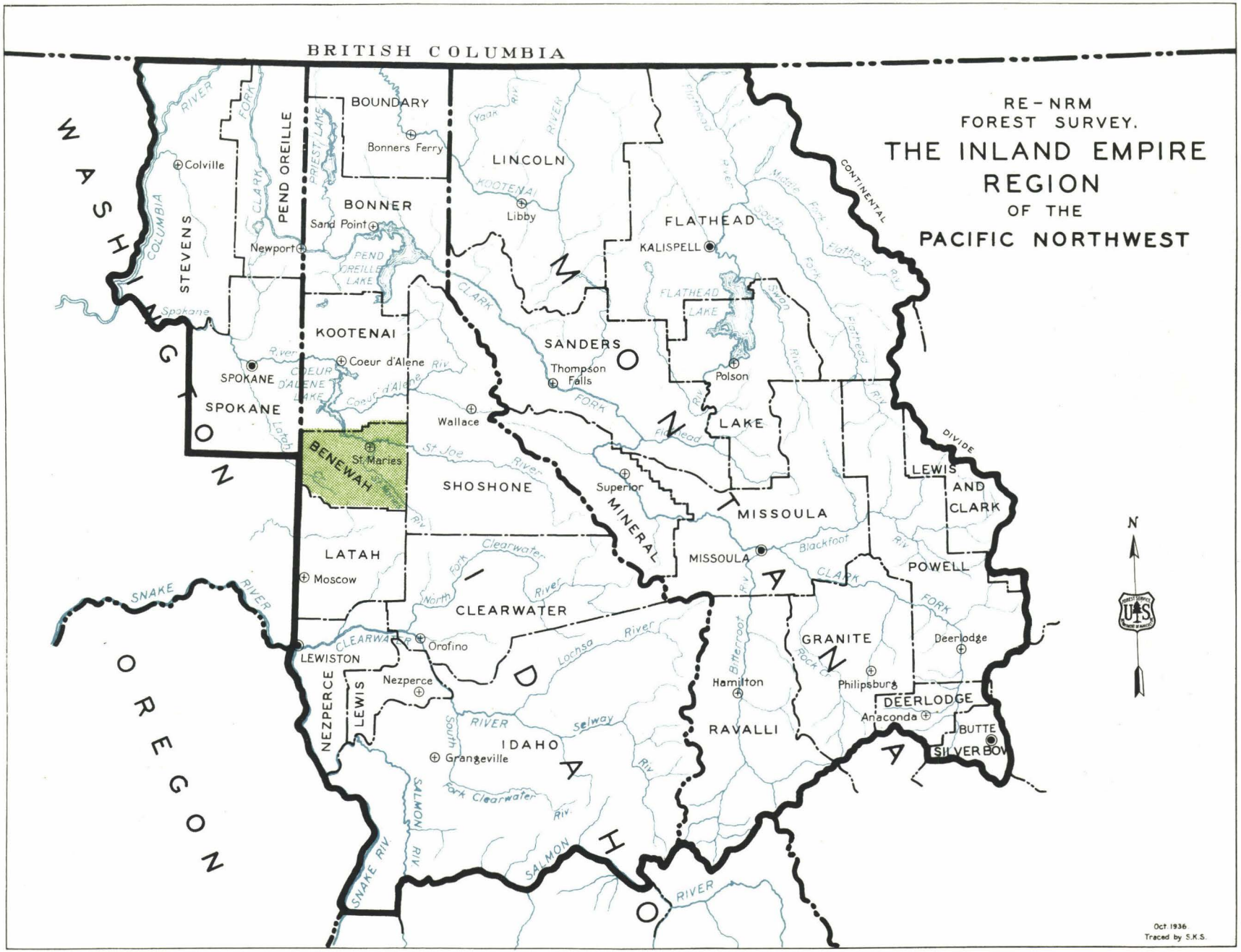
Index to Figures and Tables

Figure — Page

1 General Classification of Land- - - - - - - - - - 2
2 Character of Timberland Cover in Zones I and II 11
3 Ownership of Forest Land and Timber - - - - - - - 11
4 Actual and Desirable Distribution of Age Classes in Timberlands, Zones I and II - - - - - - - 18
5 Volume in Timber Stands by Species- - - - - - - 18
6 Volume in Sawlog Stands by Zones- - - - - - - - 18

Table

1 General Classification of Land- - - - - - - - - - 2
2 Classification of Forest Land Types According to Ownership, Zone and Size Class- - - - 22,23
3 Total Volume of Sawtimber by Type of Stand, Species, and Ownership - - - - - - - - - - 24
4 Volume of Sawtimber in Sawlog Stands by Zone, Ownership, and Species - - - - - - - - - - 25
5 Volume of Sawtimber in Sawlog Stands by Type, Zone and Species - - - - - - - - - - - - - 26
6 Classification of Immature Timber Types According to Density of Stocking - - - - - - - - 27
7 Classification of Stocked Timberlands According to Type and Site Quality - - - - - - - - - 28
8 Classification of Stocked Timberlands According to Type and Age Class, Zones I and II- - - 29
9 Average Annual Cutting Depletion from the Green Timber Resources by Tree Size, Species, and Products - - - - - - - - - - - - - - - - - - 30


BRITISH COLUMBIA
WASHINGTON
IDAHO
MONTANA
OREGON
RE-NRM
FOREST SURVEY.
THE INLAND EMPIRE
REGION
OF THE
PACIFIC NORTHWEST
BOUNDARY
Bonners Ferry
BONNER
Sand Point
Newport
PEND OREILLE
STEVENS
Colville
LINCOLN
Libby
KOOTENAI
Coeur d'Alene
SPOKANE
SANDERS
Thompson Falls
FLATHEAD
KALISPELL
Polson
LAKE
Wallace
BENEWAH
St. Maries
SHOSHONE
Superior
MISSOULA
LEWIS AND CLARK
POWELL
LATAH
Moscow
CLEARWATER
Orofino
LEWISTON
Nezperce
NEZPERCE
LEWIS
Grangeville
IDAHO
RAVALLI
Hamilton
GRANITE
Philipsburg
Deerlodge
DEERLODGE
Anaconda
BUTTE
SILVER BOW
Missoula
Clearwater
Spokane
Coeur d'Alene Lake
Flathead Lake
Priest Lake
Pend Oreille Lake
Flathead River
Clark Fork
Bitterroot
Selway
Lochsa
Salmon River
Snake River
Continental Divide
N
Oct. 1936.
Traced by S.K.S.

RE-NRM
FOREST SURVEY

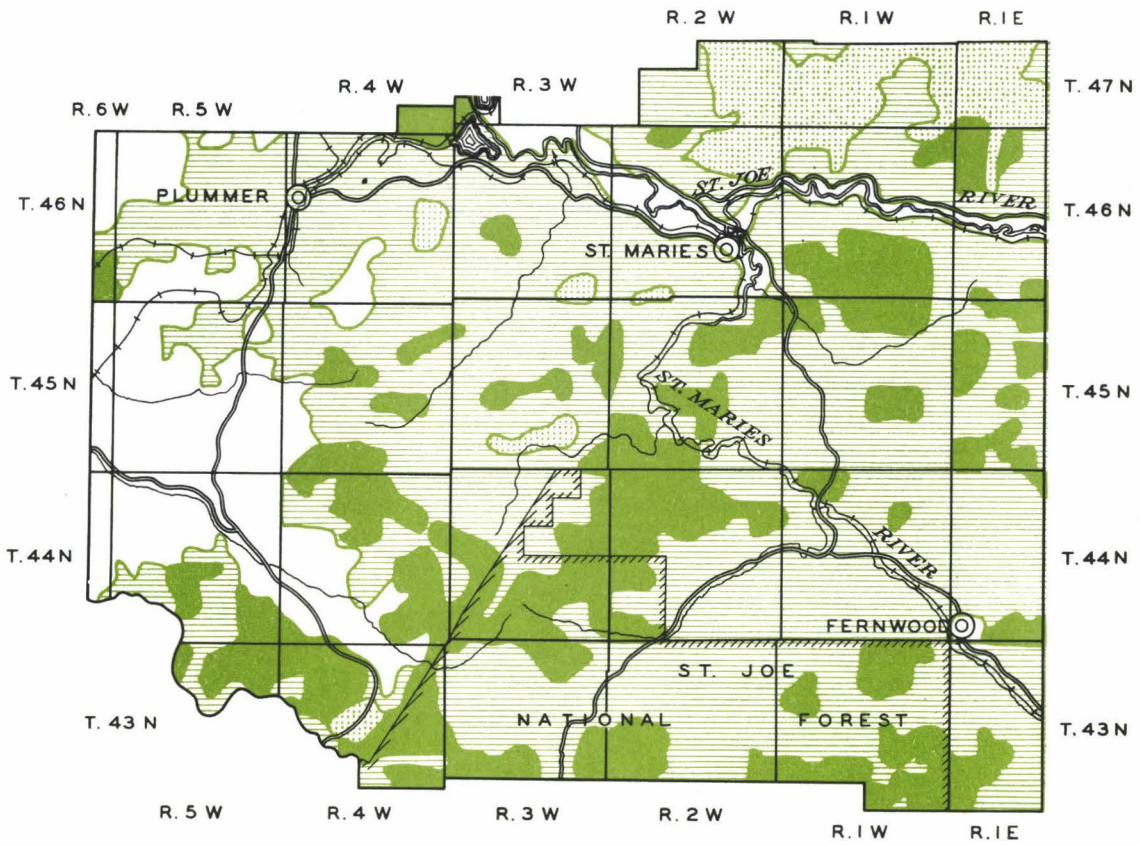
BENEWAH COUNTY

IDAHO
1937

Scale
1/2 0 1 2 3 4 5 Miles

SHOWING GENERAL TYPES

- Principally merchantable timber.
- Principally non-restocked old burns and cutovers; rocky and subalpine areas.
- Principally immature forest; recent burns and cutovers.
- Principally agricultural and grassland.



Traced by E.V.W.
Feb. 1937

RE-NRM
Forest Survey

FOREST STATISTICS FOR BENEWAH COUNTY, IDAHO

Foreword

When Captain Mullan's exploration party made its way along the banks of the St. Joe River in 1859, it found a virgin wilderness of great beauty and an untold wealth of timber. A little more than forty years later the forces of industry, marshalled to exploit this great timber wealth, found it still essentially an untouched wilderness. Looking again at Benewah County in less than twoscore years, we find extensive exploitation has removed the major portion of the virgin sawlog stands. In a comparatively short period, this exploitation has depleted the virgin sawtimber to a point where its practically complete disappearance can be forecast as a surety in the near future. The forests have been subjected to a drain far in excess of the rate of growth and today a waning lumber industry emphasizes the need for a planned utilization of the forest resources.

The Forest Survey has been instituted to furnish the basic data prerequisite to sound forest planning. This is the sixth in a series of reports summarizing the forest statistics for the counties of the Northern Rocky Mountain Region.[1/]

General

Benewah County, Idaho is located along the Washington line a few miles southeast of the city of Spokane, the trade

1/ The three northeastern Washington counties, north Idaho, and Montana.

GENERAL CLASSIFICATION OF LAND
BENEWAH COUNTY, IDAHO

Figure 1.

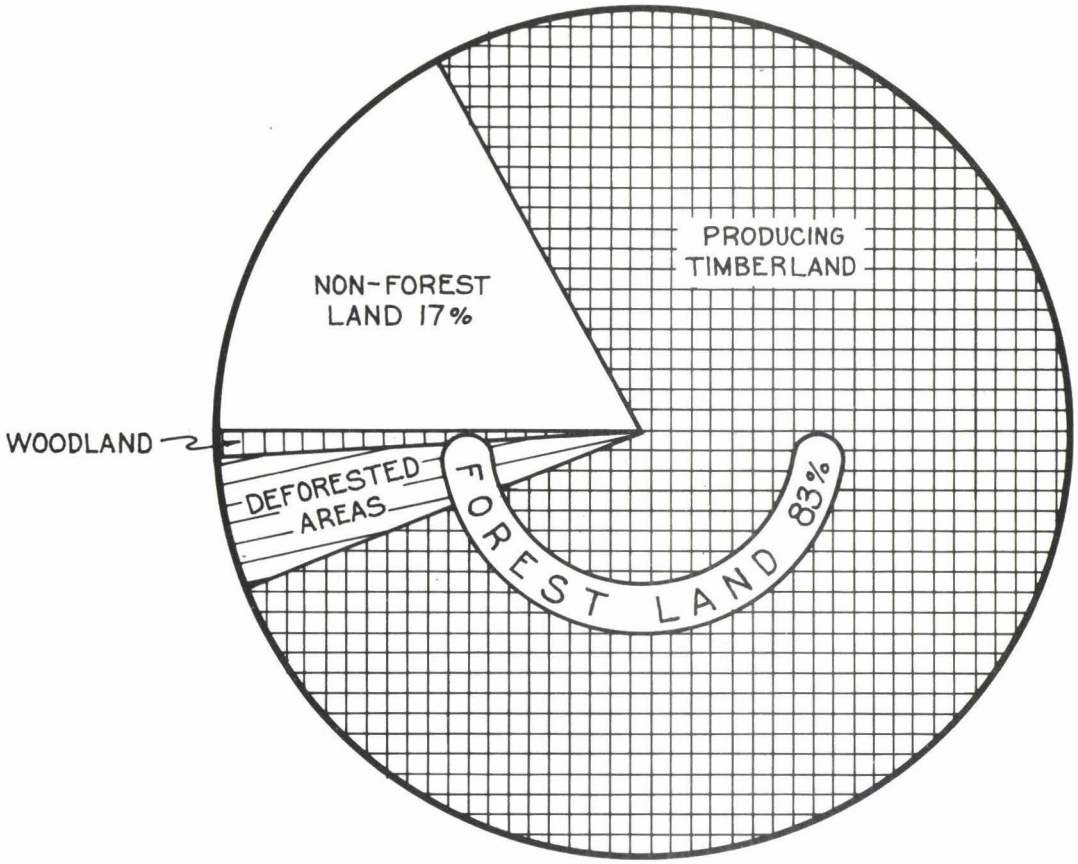


Table 1.

NON-FOREST LAND	Area in Acres
Townsites	1,219
Cultivated and Stump Pasture	79,434
Grassland	4,161
Brush	49
Total	84,863
FOREST LAND	
Timberland	
Producing	383,957
Deforested	26,729
Total	410,686
Subalpine	3,111
Rocky Noncommercial	2,138
Total	5,249
Total Forest Land	415,935
GROSS LAND AREA	500,798

center of the Inland Empire. The county is essentially a rural community, with about eight persons per square mile, agriculture and forest industry being the principal occupations. The population of the county was recorded at 6,371 by the 1930 census. In the same census the population of St. Maries, the principal town and county seat, was reported as 1,996 persons.

From the fairly level agricultural area in the western part of the county (see Map) the topography grades into mountainous forest country. Approximately 85 percent of the 500,798 acres total area (figure 1) is classified as forest land. The principal drainage is afforded by the St. Joe River, its branch, the St. Maries River, and their tributaries. The western portion of the county is drained by Latah Creek and its tributaries. The two rivers have played a major role in the transportation history of this area. Present travel facilities include, in addition, two main highways and two railroads, the Chicago Milwaukee St. Paul and Pacific Railroad and the Oregon Washington Railroad and Navigation Company.

History of Forest Exploitation

The lumber industry of Benewah County has been centered along the St. Maries and St. Joe Rivers. The forerunner of the county's lumber mills was constructed in 1889 at the year-old settlement of St. Maries by the Fisher brothers, and the first of the many and famous log drives from the St. Joe

country is said to have taken place in 1892. The opening years of the present century witnessed considerable logging activity in this area on the part of the mills around Coeur d'Alene Lake. It was some time, however, after the establishment of the first mill that there was any great lumber production in Benewah County. The first of the larger mills was constructed at St. Joe by the Milwaukee Land Co. to saw ties and timbers for the Milwaukee Railroad. Four more large mills were built during the next six years following the completion of this railroad. These mills are listed below with their periods of operation.

Company	Location	Operating Period	
		from	to
St. Maries Lbr. Co.[1]	St. Maries	1913	still operating
Blackwell Lbr. Co.	Fernwood	1912	1930
Milwaukee Lbr. Co.	St. Maries	1911	1927
Milwaukee Land Co.[2]	St. Joe	1908	1926
Milwaukee Land Co.	St. Joe	1907	1915

1/ Now the Rogers Lumber Company.
2/ Later the Winton Rosenberry Lumber Company.

It is interesting to note that to date the average operating life of these plants has been approximately 17 years. In addition to these mills, there have been a number of smaller concerns with productions ranging from a few thousand to several million board feet annually. In 1910 there were six such mills in active operation; in 1925, five; and in 1936, six.

Total lumber production figures are available for as early as 1909. During that year approximately 38 million board feet of lumber were milled in Benewah County. With the

construction of more mills, the total output climbed to a peak of 136 million board feet lumber tally in 1916. In 1926, with a cut of 58 million board feet, the mill production began a steady decline which was ended in 1932 at 6.5 million feet, 95 percent less than the 1916 figure. In 1936 the lumber cut was 12 million board feet.

In this section of north Idaho, particularly, log and lumber production figures for a single county afford an incomplete picture. The St. Joe River drainage, including parts of Shoshone, Benewah and Kootenai Counties, forms a natural production unit of which Coeur d'Alene is the mill center. Since the inception of lumbering in Shoshone County, logs have been moved downstream into Benewah, Kootenai and Spokane Counties for manufacture into lumber, and likewise a large portion of the logs from Benewah County have been milled in the latter two counties. Reliable log production figures are available only for the period since 1925. In the 12 years ending with and including 1936, 85 percent of the timber cut in Benewah County was exported from the county for milling. In this period the mills operated by the following concerns and their predecessors absorbed the main volume of the logs transported out of the county: the Blackwell Lumber Company, the Winton Lumber Company, the Ohio Match Company, the Coeur d'Alene Milling Company, and the Atlas Tie Company, all of Coeur d'Alene, Idaho, and vicinity; the Russell and Pugh Lumber Company, Springston,

Idaho; and the McGoldrick Lumber Company, Spokane, Washington. On the other hand, between 1925 and 1936, 55 percent of the lumber manufactured by the Benewah County mills came from Shoshone County timber stands.

The highest log production for Benewah County since the beginning of 1925 occurred in that first year, and totaled to 159 million board feet lumber tally. Due to operations of the outside mills there was much more activity in the woods of Benewah County than in the mills during the depression years. Log production was lowest in 1932 with a total of 24 million board feet or 85 percent less than in 1925. It climbed steadily since then to 93 million board feet in 1936, the highest since 1929. With the passing of four of the local mills, the variations of the two phases of the industry have been quite independent. This is exemplified by the fact that in 1925 lumber production was 60 percent of the log production whereas in 1936 it was but 13 percent.

Along with that reputedly first log drive in 1892 it is recorded that 10,000 cedar poles and 100,000 cedar posts were driven down the St. Joe River. A national market for these cedar products and also for shingles had been developed even before the lumber industry expanded in the early 1900's. Until the depression years, large volumes of these products were shipped from Benewah County. An estimate of the volumes of these commodities produced in recent years was made in connection with the depletion phase of the Forest Survey

(table 9). Average annual production of 1.2 million linear feet of poles and piling, 1,430 squares of shingles and 68 thousand fence posts was estimated. These averages, except for the fence posts, are conservative, being based on both depression and predepression years.

Chief among the noncedar minor timber products have been pulpwood for the Inland Paper Company and fuelwood mainly for local use. For the period 1927-1934 inclusive, pulpwood production averaged 5 thousand cords annually. The yearly fuelwood production is estimated to equal 22 thousand cords.

Dependent Population

The past decade or so has seen a marked change in the industrial make-up of Benewah County. As a direct consequence of the closing of all but one of the large mills, employment in the lumber industry declined 60 percent between 1925 and 1936 and now ranks second in importance.

In 1925 it is estimated that the lumber industry furnished the equivalent of full time employment for more than 1,400 persons. In that same year it is estimated that about 700 persons were employed on the 477 farms in Benewah County. Agriculture and forest industry were the principal activities. Considering the fact that approximately 25 percent of the workers in Benewah County have been engaged in secondary industries such as retailing, or the professions, and are therefore supported indirectly by the basic industries, it can be fairly said that the lumber industry supported at that

time almost 60 percent of the population in Benewah County.

In 1932 the industry furnished the equivalent of full time employment for 160 or 170 persons. As much of this decline was due to general rather than local conditions, no fair comparison can be made of these years. In 1936, however, it is estimated that less than 600 persons were given full time employment by the lumber industry, whereas over 950 were employed in agriculture enterprise (957, 1935 census). Lumbering thus supported 30 percent instead of 60 percent of the population.

These figures for forest employment do not include the permanent and temporary personnel employed by the Forest Service and other public and semi-public forest agencies. While no figures are available on a county basis, many workers in Benewah County have received employment from these agencies. This is particularly true in recent years with the expenditure of emergency relief money. The June 1937 report from the St. Joe National Forest shows a payroll of 1,149 persons. This forest lies in Shoshone, Benewah and Latah Counties. Although many of those employed have been from outside of this district and although this high employment is more or less temporary, the importance of this type of forest work is clearly indicated.

Agricultural Development

The greatly increased number of agricultural workers has been due largely to the recent influx into the northwest

of farmers from the dust bowl portion of the Prairie States. Between 1930 and 1935 the farms in Benewah County increased 23 percent, from 534 to 657. The permanence of this recent farm settlement can but be surmised as the 1920 census reported a total of 573 farms in this county with a later drop to 477 in 1925.

Many of the 657 farms reported in 1935 did not furnish the sole income for their operators. In that year 55.6 percent of the operators reported work off their own farms amounting to 32,960 man days or 50 days per year for every farm operator in the county. A very large share of this outside employment has been in private lumber industry and public forest improvement and protection work.

The Forest Survey has mapped a total of 71,718 acres in Benewah County as agricultural. In addition, there are 7,716 acres of stump pasture in the process of being cleared for this use.

Present Sawlog Area

Perhaps the most characteristic fact brought out in the forest inventory of the north Idaho counties is the surprisingly large area and volume of merchantable timber. In Benewah County, without the proper evaluation, the statistics apparently belie the facts. With over 150 thousand acres logged in the forty years just past, the present inventory of 111,393 acres of sawlog stands appears as ample to sustain the lumber industry for a considerable period in the future.

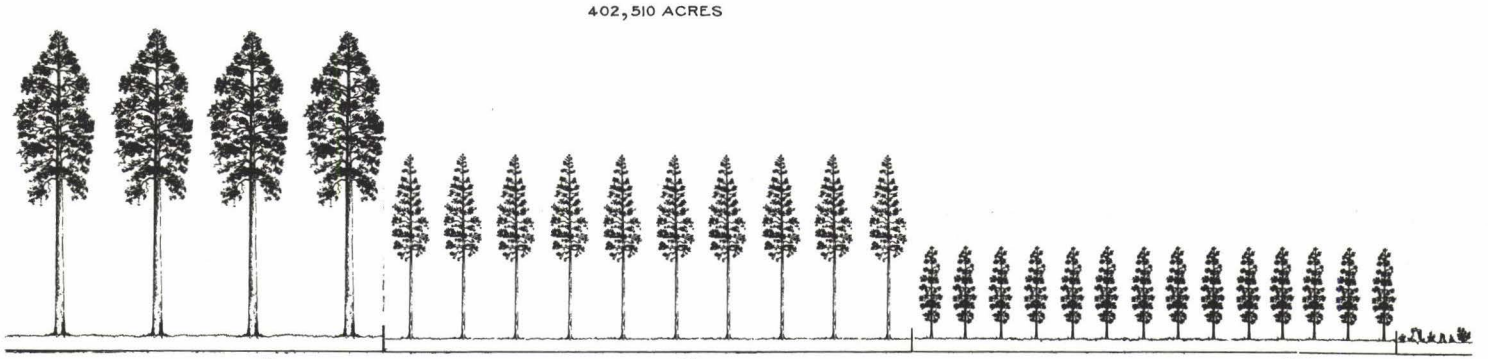
Systematic dissection and analysis, however, indicate that probably not more than two-thirds of this area has commercial significance.

Up to the present time the lumber industry in north Idaho has been supported by two species, white pine and ponderosa pine. These two species, particularly the former, have furnished a cut entirely out of balance with their relative representation in the sawlog stands. From 1900 to 1930 they represented approximately two-thirds of the total lumber cut in north Idaho. From then through 1935 the five-year total consisted of 84 percent white pine and ponderosa pine, with the percentage of ponderosa pine falling off considerably in favor of white pine. In the period 1900-1930, approximately 38 percent of the north Idaho lumber production was white pine, and in the latter five years 73 percent of the cut was comprised of this species.

It is impossible to any more than guess which way these ratios will move in the next five or ten years, but at present the tendency to concentrate on the two major species appears to be more than a temporary trend. For that reason the "dead head" minor species constitute the greatest silvicultural and financial problem to the forest industry of the Inland Empire, and any improvement in prices sufficient to remove them from this category will do much to make sustained yield management an attainable reality.

Fig. 2

CHARACTER OF TIMBERLAND COVER IN ZONES ONE AND TWO — BENEWAH COUNTY, IDAHO.



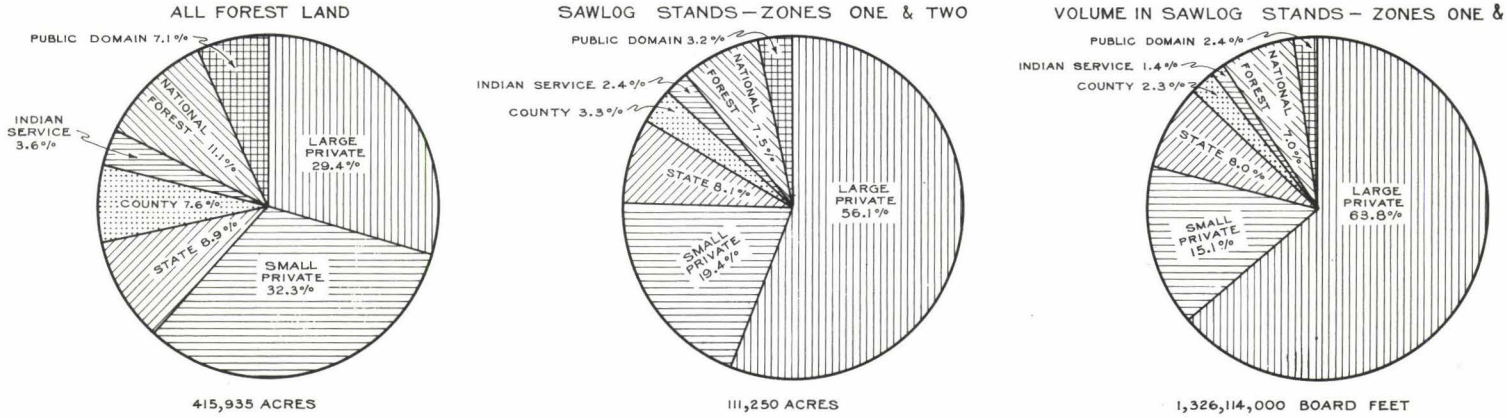
*Including merchantable cedar-white fir pole stands

**Including all immature cottonwood stands

***Including recent burns and cutovers

Fig. 3

OWNERSHIP OF FOREST LAND AND TIMBER — BENEWAH COUNTY, IDAHO.



FOR DEFINITION OF ZONES — SEE GLOSSARY

In the Forest Survey type classification, the white pine type includes any sawlog stand with as little as 15 percent by volume of white pine. By similar definition, a sawlog stand needs only 25 percent ponderosa pine to fall in that type. Thus it is very evident that present operations need not go out of the white pine and ponderosa pine stands for the 16 percent of the total cut which in recent years has consisted of minor species. Actually the timber operators may cut over 40 percent minor species without going out of the white pine and ponderosa pine stands, as of a total volume of 1,055 million board feet in the sawlog stands of these two types 486 million feet are minor species.

The Forest Survey has also catalogued all stands according to their accessibility for conversion into timber products. An attempt has been made to divide the forest area into three zones of accessibility. Zone one includes the area immediately loggable; zone two, the area loggable with an increase in stumpage values; and zone three, the economically inaccessible portion. The Survey has mapped a total of 43,177 acres of zone one white pine sawlog stands and 36,332 acres of zone one ponderosa pine sawlog stands, a total of 79,509 acres or 29 percent less than the 111 thousand acres total sawlog area.

Eleven percent of the zone one sawlog area (11,836 acres) has been partially logged in the past and contains a total volume of 101,523,000 board feet.

Timber Volumes

The sawlog stands of Benewah County, with the relatively low average per acre volume of 11,900 board feet, have a total volume of 1,327,408,000 board feet log scale. Ninety-seven percent of this is in zone one, only 36 million feet and one million feet, respectively, being in zones two and three.

There are 338,139,000 board feet of white pine and 255,273,000 board feet of ponderosa pine in zones one and two sawlog stands of all types. In 1935 and 1936 the average yearly production of white pine sawlogs in Benewah County was 40,009,000 board feet log scale and for ponderosa pine 17,942,000 board feet. Continuing depletion at the rate of the past two years, the present sawlog supply of white pine would be exhausted in eight and one-half years and the ponderosa pine in fourteen years. This disregards the matter of type and includes the comparatively small volume of these two species in the minor types which it may not be feasible to log. What is more likely than a continuance at the present rate of cutting followed by an abrupt exhaustion of available timber, is that there will soon begin a "tapering off" with production eventually becoming stabilized at a figure considerably lower than at present. This calculation, however, places a very definite limit on what may be expected in the near future.

Logging activity is, at present, concentrated in the several remaining large blocks of timber, leaving an increasing proportion of the uncut stumpage in comparatively small and scattered bodies. Although truck logging has lessened the significance of this fact, the scatter of these white pine and ponderosa pine stands, nevertheless, considerably reduces their desirability as logging chances.

The average volumes per acre in sawlog stands of the various types are listed in the following tabulation.

All types	11,900	board	feet	per	acre	all	species
White pine type	15,800	"	"	"	"	"	"
Ponderosa pine type	9,500	"	"	"	"	"	"
Larch-Douglas fir and Douglas fir types	9,000	"	"	"	"	"	"
Other types	9,800	"	"	"	"	"	"

However, the white pine sawlog stands contain but 7,200 board feet per acre of white pine, and the ponderosa pine sawlog stands but 5,900 board feet per acre of ponderosa pine.

To make the forest inventory complete, the Forest Survey has estimated a residual volume in the younger stands of 62 million board feet, principally ponderosa pine, larch and Douglas fir (table 3). This volume, contained in scattered sawlog trees in pole, seedling and sapling stands, has no sawtimber value but it has furnished a considerable portion of the fuelwood cut annually.

The total net board foot volume figures given in this report are considerably higher than any previous estimates. They include, as already mentioned, the volumes in scattered trees on cutover and burned areas and the volumes in

inaccessible and unloggable stands. Though the standards of tree merchantability set up for the Forest Survey compare closely with the actual utilization for such species as western white pine, ponderosa pine and lodgepole pine, they include trees of smaller diameter than those usually cut in the case of the less valuable sawlog species such as hemlock and Douglas fir. As an example, the Forest Survey includes all sound hemlock trees larger than 13 inches in diameter breast high that have two logs to an eight inch top and are physically suitable for lumber, while private cruises seldom include hemlock trees of such small diameter and height.

Other Forest Area

Including the previously mentioned sawlog stands, Benewah County has a total timberland area of 410,686 acres. Of this total, 223,684 acres or 54 percent contain stands of less than sawlog size--stands ranging from small seedlings to large poles on the verge of being merchantable. Table 8 indicates a total area of 33,392 acres of zones one and two stands in the 81-120 year age class, of which 17,165 acres are in the two major pine types.

There are 48,880 acres of timberland classed as recent burns and cutovers. This group includes areas recently burned, or logged and burned which were in an indefinite status at the time of mapping. In addition, this classification includes approximately 28 thousand acres logged in Benewah County since the type mapping which was done in 1932 and 1933.

Approximately 6 percent of the total timberland area, 26,729 acres, has been classified as deforested. This includes areas cut or burned prior to 1925 which were in a denuded state at the time of type mapping. Only 5,111 acres contain noncommercial subalpine stands and 2,138 acres are noncommercial because of rockiness, steepness of slope or sterility of soil.

Forest Ownership

In Benewah County there are seven major classes of forest land proprietorship, five of which are public. Private lands have been divided into two classes, small private and large private, the latter group being comprised of areas owned in relatively large blocks by individuals or concerns. Shown in figure 3, there is a fairly complete distribution of ownership in the county. This figure indicates the variety in the value and quality of the lands in these holdings, a variation that is directly related to the type of ownership. Whereas all of these classes except state and large private own a much lower percentage of the sawlog area and volume than of the total forest area, the ratios decrease only slightly for state lands and increase for large private from 29.4 to 56.1 to 63.8 percent for total forest area, zones one and two sawlog area, and zones one and two sawlog volume, respectively.

The following tabulation shows the relation of sawlog area to total forest area in each class of ownership.

Ownership Class	Total forest area	Area of sawlog stands	Percentage of sawlog area in total forest holdings
Large private	122,172	62,446	51
Small private	134,421	21,645	16
State	37,184	8,997	24
County	31,279	3,632	12
Indian Service	15,159	2,681	18
National Forest	46,244	8,350	18
Public Domain	29,476	3,642	12
Total all owners	415,935	111,393	27

The low values prevailing in logged-over areas have forced a degree of tax delinquency which may foreshadow a very marked change in the forest land ownership picture in Benewah County. In a tabulation of tax delinquency made in 1934,[2/] it is recorded that 56 percent of the 209 thousand acres of privately owned land classified as timber, cutover, and waste was in tax arrears one or more years. Since 1934 the Forest Service has been the object of considerable land donation, having acquired over 20 thousand acres principally in this manner.

Sustained Yield Possibilities

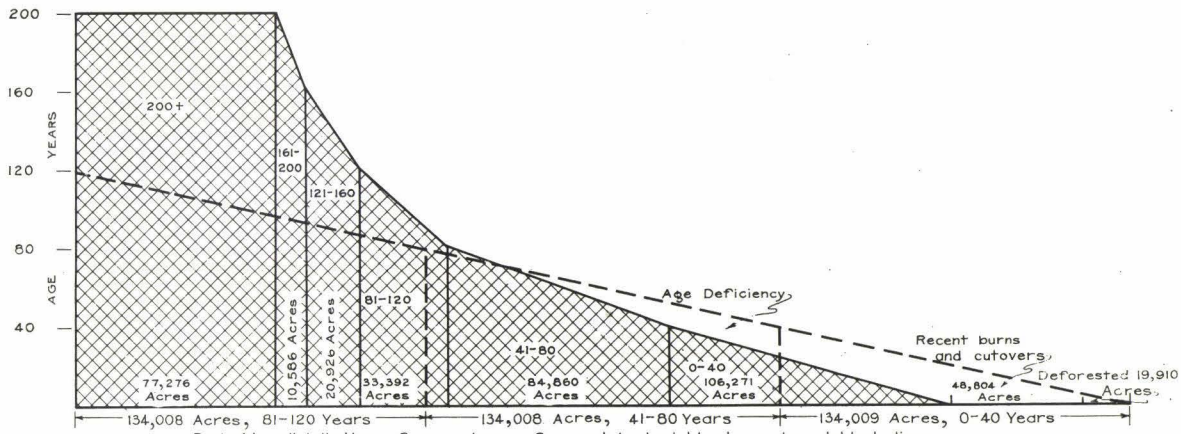
The forest management problem for the Inland Empire is not one that can be reduced to any concise mathematical formula. On the contrary, any statement on this subject must include the many qualifications due to variations in timber types,

2/ "Basic Data for Land Classification of Benewah County" University of Idaho Agricultural Experiment Station.

Fig. 4

ACTUAL AND DESIRABLE DISTRIBUTION OF AGE CLASSES IN TIMBERLANDS ZONES ONE AND TWO — BENEWAH COUNTY, IDAHO.

402,025 ACRES*



Desirable distribution of age classes for sustained yield shown by dotted lines.

*Cottonwood not included

Fig. 5

VOLUME IN TIMBER STANDS BY SPECIES BENEWAH COUNTY, IDAHO.

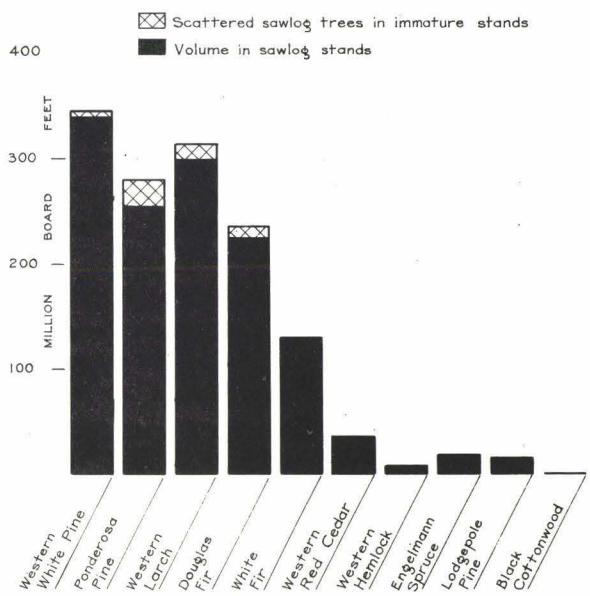
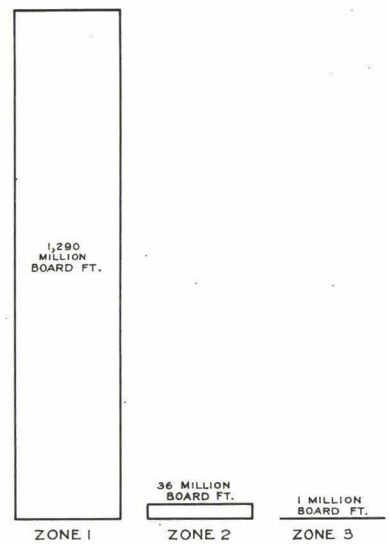


Fig. 6

VOLUME IN SAWLOG STANDS BY ZONES BENEWAH COUNTY, IDAHO.



FOR DEFINITION OF ZONES—SEE GLOSSARY

growing conditions, relative lumber values, nearness to markets and many other factors. From the physical management standpoint there are silvicultural possibilities ranging from the clearcut operations once every rotation period, apparently the best suited for perpetuation of the white pine, to the partial cropping twice or several times in a rotation, as is possible in many ponderosa pine stands.

Not requiring a preponderance of merchantable stands, sustained yield production requires instead a desirable distribution of age classes--enough young stands in the various stages of maturity to insure a constant succession of croppable areas. In figure 4 the distribution of age classes in zones one and two timber stands is shown. For the purpose of comparison the minimum desirable age class distribution for the simplest type of management, and likewise the one with the lowest stand inventory requirements, is shown by the dotted line. It pictures a 120-year rotation generally accepted as the most desirable, at present, for the management of white pine which predominates in Benewah County. It presupposes the clear cutting of one one-hundred-twentieth of the total timberland area yearly in a perpetuating succession.

Despite the fact that many of the areas already logged in Benewah County were cut, leaving merchantable stands or advance young growth, a maldistribution of age classes is seen. Past overcutting has resulted in an undesirable age pattern with insufficient area containing 41-to 80-year-old

stands. With 75.5 percent of the sawlog area privately owned, no workable solution appears as a possibility to prevent this maldistribution of age classes from becoming more serious in the next few years.

Analysis of these statistics and the past history of Benewah County, however, is likely to result in a viewpoint entirely too pessimistic from a long time standpoint. Present economic conditions militate against the application of those desirable forest management practices which will come with a planned economy designed to secure full benefit from the forest resource. Although the virgin stands are being depleted at a too rapid rate, considerable satisfaction can be derived from the fact that the cut-over areas are not for the most part being denuded. Growing and stand establishment conditions are excellent. The inventory reveals a fine collection of young stands which, if protected from fire, blister rust and insects, will offer in the coming years the foundations for sound, applied forest management.

.....

Designed to meet the many and varied needs for information, a wealth of data is at hand for each county. In this publication, it has been necessary to sacrifice some of the detail to brevity, and consequently the information herein is generalized into the more important classifications. Subsequent reports for the economic unit, of which Benewah County is a part, will cover the material in more detail, going much

farther than this preliminary analysis in making interpretations based on various economic considerations.

To facilitate the most intelligent use of the tables in this publication, the methods followed and the types, terms, and classifications used in collecting and presenting these data are described in a supplementary report.[3/] Brief definitions of the more important of these are contained in the glossary.

.....

The figures in this report are preliminary and subject to correction in future releases.

INVENTORY PHASE -- BENEWAH COUNTY, IDAHO

G.M. DeJarnette and P.D. Kemp, in Charge

Type Mapping	Check Cruising	Compilation
L.J. Cummings	F.B. Casler	O.B. Johnson
H.O. Ficke	R.J. Smith	W.F. Gunterman
F.B. Casler		J.J. McHugh
		M.E. Metcalf
		H.J. Pissot
		A.W. Carlson
		R.L. Conn

Report Writing -- S.B. Hutchison

3/ Forest Survey Release No. 3. The Inventory Phase of the Forest Survey for the Northern Rocky Mountain Region--A Definition of the Procedure, Terms, and Classifications.

RE-NFM
Forest Survey

Table 2 CLASSIFICATION OF FOREST LAND TYPES ACCORDING TO OWNERSHIP, ZONE AND SIZE CLASS
BENEWAH COUNTY, IDAHO

Area in Acres

(Continued on next page)

Timber Type	Zone	Large Private					Small Private					State: Available for conversion					State: Reserved				County				
		Sawlog	Pole	Seedling and Sapling	Recent Burns and Cutovers	Total	Sawlog	Pole	Seedling and Sapling	Recent Burns and Cutovers	Total	Sawlog	Pole	Seedling and Sapling	Recent Burns and Cutovers	Total	Sawlog	Pole	Seedling and Sapling	Total	Sawlog	Pole	Seedling and Sapling	Recent Burns and Cutovers	Total
Western white pine	1	31,441	9,916	7,929	21,231	70,517	3,624	17,371	9,948	2,948	33,891	3,072	4,228	8,359	1,756	17,415	87	215	33	335	485	5,133	5,486	1,168	12,272
	2	348	76	262	25	711	59		20		79	50				50					84				84
	3			17	11	28																			
	Total	31,789	9,992	8,208	21,267	71,256	3,683	17,371	9,968	2,948	33,970	3,122	4,228	8,359	1,756	17,465	87	215	33	335	569	5,133	5,486	1,168	12,356
Ponderosa pine-pure	1	3,380				3,380	2,239				2,239	534				534	1,563			1,563	57				57
Ponderosa pine-mixed	1	13,547	1,318	1,196	2,409	18,470	8,893	28,227	15,448	3,251	55,819	1,471	2,076	428	319	4,294	480	952	107	1,539	481	3,372	2,389	224	6,466
	2						629				629										236				236
	Total	13,547	1,318	1,196	2,409	18,470	9,522	28,227	15,448	3,251	56,448	1,471	2,076	428	319	4,294	480	952	107	1,539	717	3,372	2,389	224	6,702
Ponderosa pine-Total	1	16,927	1,318	1,196	2,409	21,850	11,132	28,227	15,448	3,251	58,058	2,005	2,076	428	319	4,828	2,043	952	107	3,102	538	3,372	2,389	224	6,523
	2						629				629										236				236
	Total	16,927	1,318	1,196	2,409	21,850	11,761	28,227	15,448	3,251	58,687	2,005	2,076	428	319	4,828	2,043	952	107	3,102	774	3,372	2,389	224	6,759
Larch-Douglas fir	1	11,038	2,295	661	3,144	17,138	4,319	13,087	2,498	203	20,107	1,531	1,891	909	663	4,994	72	760	192	1,024	1,594	3,621	955	98	6,268
	2	118		32		150	277	164	75		516		47			47					209		364		573
	3			298		298	52	4	120		176														
	Total	11,156	2,295	991	3,144	17,586	4,648	13,255	2,693	203	20,799	1,531	1,938	909	663	5,041	72	760	192	1,024	1,803	3,621	1,319	98	6,841
Hemlock-white fir	1	130		48	20	198	131	1,777	291	128	2,327		213			213					46				46
Douglas fir	1	3	311			314	317	1,509			1,826	20	243			263		555	313	868		231			231
	2	12				12	60				60										93				93
	Total	15	311			326	377	1,509			1,886	20	243			263		555	313	868	93	231			324
Lodgepole pine	1	31	172	1,688		1,891	402	616	2,071		3,089		146	986		1,132					5	140	1,073		1,218
	2								11		11			127		127							29		29
	Total	31	172	1,688		1,891	402	616	2,082		3,100		146	1,113		1,259					5	140	1,102		1,247
Western red cedar 2/ 3/	1	2,176		493	1,220	3,889	70		25		95								79	79	284		228		512
Cedar-white fir 2/	1	213	1,670		1,356	3,239	434	2,229	71	122	2,856	117	436	32		585					58	297	153		508
Cottonwood 4/	1	9				9	139				139							334		334					
Total Producing Timberland	1	61,968	15,582	12,015	29,380	119,045	20,568	64,816	30,352	6,652	122,388	6,745	9,233	10,714	2,738	29,430	2,202	2,816	724	5,742	3,010	12,794	10,284	1,490	27,578
	2	478	76	294	25	873	1,025	164	106		1,295	50	47	127		224					622		393		1,015
	3			315	11	326	52	4	120		176														
	Total	62,446	15,758	12,624	29,416	120,244	21,645	64,984	30,578	6,652	123,859	6,795	9,280	10,841	2,738	29,654	2,202	2,816	724	5,742	3,632	12,794	10,677	1,490	28,593
Nonrestocked Old Burns and Cutovers	1					997					8,383					1,212				10					2,008
	2					112					512					6									179
	3					670					475					6									
	Total					1,779					9,371					1,224				10					2,187
Total Timberland	1					120,042					130,771					30,642				5,752					29,586
	2					985					1,808					230									1,194
	3					996					651					6									
	Total					122,023					133,230					30,878				5,752					30,780
Subalpine, Rocky Noncommercial	1										908					59									68
	2										18														76
	3					149					265					449				46					355
	Total					149					1,191					508				46					499
GROSS FOREST AREA	1					120,042					131,679					30,701				5,752					29,654
	2					985					1,826					230									1,270
	3					1,145					916					455				46					355
	Total					122,172					134,421					31,386				5,798					31,279

1/ Available for conversion.
2/ In this table merchantable cedar and cedar-white fir pole stands are classed with sawlog stands.
3/ For the western red cedar type pole, seedling and sapling stands are grouped in one class.
4/ All immature cottonwood stands are grouped in one class.

Data as of 1937

RE-NRM
Forest Survey

Table 2 CLASSIFICATION OF FOREST LAND TYPES ACCORDING TO OWNERSHIP, ZONE AND SIZE CLASS
BENEWAH COUNTY, IDAHO

(Continued from preceding page)

Area in Acres

Timber Type	Zone	Indian Service					National Forest 1/					Public Domain					Total					Total Available for Conversion				
		Sawlog	Pole	Seedling and Sapling	Recent Burns and Cutovers	Total	Sawlog	Pole	Seedling and Sapling	Recent Burns and Cutovers	Total	Sawlog	Pole	Seedling and Sapling	Recent Burns and Cutovers	Total	Sawlog	Pole	Seedling and Sapling	Recent Burns and Cutovers	Total	Sawlog	Pole	Seedling and Sapling	Recent Burns and Cutovers	Total
Western white pine	1						3,993	14,570	6,849	7,363	32,775	475	3,116	3,727	155	7,473	43,177	54,549	42,331	34,621	174,678	43,090	54,334	42,298	34,621	174,343
	2								2		2	580	145	183		908	1,121	221	467	25	1,834	1,121	221	467	25	1,834
	3								73	50	123			24	15	39			114	76	190			114	76	190
	Total						3,993	14,570	6,924	7,413	32,900	1,055	3,261	3,934	170	8,420	44,298	54,770	42,912	34,722	176,702	44,211	54,555	42,879	34,722	176,367
Ponderosa pine-pure	1	2,053				2,053											9,826				9,826	8,263				8,263
Ponderosa pine-mixed	1	628	9,623	1,669	85	12,005	537	1,380	234	284	2,435	469	156	364	104	1,093	26,506	47,104	21,835	6,676	102,121	26,026	46,152	21,728	6,676	100,582
	2											76				76	941				941	941				941
	Total	628	9,623	1,669	85	12,005	537	1,380	234	284	2,435	545	156	364	104	1,169	27,447	47,104	21,835	6,676	103,062	26,967	46,152	21,728	6,676	101,523
Ponderosa pine-Total	1	2,681	9,623	1,669	85	14,058	537	1,380	234	284	2,435	469	156	364	104	1,093	36,332	47,104	21,835	6,676	111,947	34,289	46,152	21,728	6,676	108,845
	2											76				76	941				941	941				941
	Total	2,681	9,623	1,669	85	14,058	537	1,380	234	284	2,435	545	156	364	104	1,169	37,273	47,104	21,835	6,676	112,888	35,230	46,152	21,728	6,676	109,786
Larch-Douglas fir	1		853			853	3,537	1,541	1,129	370	6,577	527	1,230	1,040	12	2,809	22,618	25,278	7,384	4,490	59,770	22,546	24,518	7,192	4,490	58,746
	2						107		216		323	614	177	621		1,412	1,325	388	1,308		3,021	1,325	388	1,308		3,021
	3								456		456	91	57	89		237	143	61	963		1,167	143	61	963		1,167
	Total		853			853	3,644	1,541	1,801	370	7,356	1,232	1,464	1,750	12	4,458	24,086	25,727	9,655	4,490	63,958	24,014	24,967	9,463	4,490	62,934
Hemlock-white fir	1		86			86	79				79						386	2,076	339	148	2,949	386	2,076	339	148	2,949
Douglas fir	1							8			8	11	194			205	351	3,051	313		3,715	351	2,496			2,847
	2											419				419	584				584	584				584
	Total							8			8	430	194			624	935	3,051	313		4,299	935	2,496			3,431
Lodgepole pine	1							128	975		1,103			40		40	438	1,202	6,833		8,473	438	1,202	6,833		8,473
	2								105		105			326		326			598		598			598		598
	Total							128	1,080		1,208			366		366	438	1,202	7,431		9,071	438	1,202	7,431		9,071
Western red cedar 2/ 3/	1						94		206	125	425	11			21	32	2,635		1,031	1,366	5,032	2,635		952	1,366	4,953
Cedar-white fir 2/	1		93			93		772			772	369	151			520	1,191	5,648	256	1,478	8,573	1,191	5,648	256	1,478	8,573
Cottonwood 4/	1						3				3						151	334			485	151				151
Total Producing Timberland	1	2,681	10,655	1,669	85	15,090	8,243	18,399	9,393	8,142	44,177	1,862	4,847	5,171	292	12,172	107,279	139,242	80,322	48,779	375,622	105,077	136,426	79,598	48,779	369,880
	2						107		323		430	1,689	322	1,130		3,141	3,971	609	2,373	25	6,978	3,971	609	2,373	25	6,978
	3								529	50	579	91	57	113	15	276	143	61	1,077	76	1,357	143	61	1,077	76	1,357
	Total	2,681	10,655	1,669	85	15,090	8,350	18,399	10,245	8,192	45,186	3,642	5,226	6,414	307	15,589	111,393	139,912	83,772	48,860	383,957	109,191	137,096	83,048	48,860	378,215
Nonrestocked Old Burns and Cutovers	1										848					3,325					16,783					16,773
	2										140					2,177					3,127					3,127
	3										70					5,598					6,819					6,819
	Total										1,058					11,100					26,729					26,719
Total Timberland	1					15,090					45,025					15,497					392,405					386,653
	2										570					5,318					10,105					10,105
	3										649					5,874					8,176					8,176
	Total					15,090					46,244					26,689					410,686					404,934
Woodland Types: Subalpine, Rocky Noncommercial	1					69															1,104					1,104
	2															89					183					183
	3															2,698					3,962					3,916
	Total					69										2,787					5,249					5,203
GROSS FOREST AREA	1					15,159					45,025					15,497					393,509					387,757
	2										570					5,407					10,288					10,288
	3										649					8,572					12,132					12,092
	Total					15,159					46,244					29,476					415,935					410,137

1/ Available for conversion.
2/ In this table merchantable cedar and cedar-white fir pole stands are classed with sawlog stands.
3/ For the western red cedar type pole, seedling and sapling stands are grouped in one class.
4/ All immature cottonwood stands are grouped in one class.

Data as of 1937

RE-NRM
Forest Survey

Table 3 TOTAL VOLUME OF SAWTIMBER BY TYPE OF STAND, SPECIES AND OWNERSHIP
BENEWAH COUNTY, IDAHO

Ownership Class	Volume by species - thousand board feet net log scale (Scribner Dec. C)											Pieces
	Western white pine	Ponderosa pine	Western larch	Douglas fir	White°° fir	Western red cedar	Western hemlock	Engelmann spruce	Lodgepole pine	Northern black cottonwood	Total	Cedar poles
	Sawlog Stands° (all zones)											
Large Private	267,238	121,092	193,971	127,530	81,498	25,395	3,310	15,455	10,777	27	846,293	425,624
Small Private	21,349	70,072	41,655	42,690	16,504	3,227	221	776	3,587	417	200,498	39,206
State (available)	15,747	15,498	16,801	16,147	7,966	1,676	54	248	23		74,160	29,243
State (reserved)	740	21,048	4,474	4,880	570						31,712	
County	3,905	4,291	11,386	6,682	3,440	491	20	249	274		30,738	9,332
Indian Service		17,023	608	1,375	240						19,246	
National Forest	24,398	3,299	25,446	19,082	11,589	3,783	3,603	641	643	9	92,493	36,471
Public Domain	4,762	2,950	7,068	7,517	8,582	877	45	310	157		32,268	3,209
Total	338,139	255,273	301,409	225,903	130,389	35,449	7,253	17,679	15,461	453	1,327,408	543,085
Available for conversion	337,399	234,225	296,935	221,023	129,819	35,449	7,253	17,679	15,461	453	1,295,696	543,085
	Scattered Sawlog Trees in Immature Stands (all zones)											
Large Private	1,261	1,352	1,913	1,190	247	17	70	11	326		6,387	
Small Private	1,894	16,129	5,016	5,430	514	25	66	17	837		29,928	
State (available)	788	1,168	1,366	931	176	11	38	8	229		4,715	
State (reserved)	43	491	179	451	13				11	59	1,247	
County	747	2,363	1,525	1,261	176	10	32	6	258		6,378	
Indian Service	35	3,853	326	698	19		1		82		5,014	
National Forest	1,380	942	2,010	1,121	285	20	64	13	220		6,055	
Public Domain	457	428	913	655	115	6	19	4	77		2,674	
Total	6,605	26,726	13,248	11,737	1,545	89	290	59	2,040	59	62,398	
Available for conversion	6,562	26,235	13,069	11,286	1,532	89	290	59	2,029		61,151	
Grand Total	344,744	281,999	314,657	237,640	131,934	35,538	7,543	17,738	17,501	512	1,389,806	543,085

° Includes volume in cedar and cedar-white fir merchantable pole stands.
°° Includes some alpine fir.

Data as of 1937

RE-NRM
Forest Survey

Table 4 VOLUME OF SAWTIMBER IN SAWLOG STANDS* BY ZONE, OWNERSHIP AND SPECIES
BENEWAH COUNTY, IDAHO

Ownership Class	Volume by species - thousand board feet net log scale (Scribner Dec. C)											Pieces
	Western white pine	Ponderosa pine	Western larch	Douglas fir	White** fir	Western red cedar	Western hemlock	Engelmann spruce	Lodgepole pine	Northern black cottonwood	Total	Cedar poles
	Zone 1											
Large Private	262,469	121,019	193,151	126,245	79,584	25,301	3,310	15,455	10,765	27	837,326	424,703
Small Private	20,986	66,252	38,861	41,214	15,821	3,154	101	776	3,587	417	191,169	39,206
State (available)	15,523	15,498	16,785	16,077	7,678	1,639	54	248	23		73,525	29,243
State (reserved)	740	21,048	4,474	4,880	570						31,712	
County	3,549	3,308	10,650	5,357	2,839	433	20	249	274		26,679	9,332
Indian Service		17,023	608	1,375	240						19,246	
National Forest	24,345	3,288	25,072	18,889	11,557	3,772	3,603	641	643	9	91,819	36,471
Public Domain	1,980	2,200	4,716	3,718	4,926	479	23	310	157		18,509	3,186
Total	329,592	249,636	294,317	217,755	123,215	34,778	7,111	17,679	15,449	453	1,289,985	542,141
Available for conversion	328,852	228,588	289,843	212,875	122,645	34,778	7,111	17,679	15,449	453	1,258,273	542,141
	Zone 2											
Large Private	4,769	73	820	1,285	1,914	94			12		8,967	921
Small Private	363	3,820	2,435	1,419	615	73	120				8,845	
State (available)	224		16	70	288	37					635	
County	356	983	736	1,325	601	58					4,059	
National Forest	53	11	374	193	32	11					674	
Public Domain	2,782	750	1,715	3,699	3,583	398	22				12,949	23
Total	8,547	5,637	6,096	7,991	7,033	671	142		12		36,129	944
	Zone 3											
Small Private			359	57	68						484	
Public Domain			637	100	73						810	
Total			996	157	141						1,294	
Grand Total	338,139	255,273	301,409	225,903	130,389	35,449	7,253	17,679	15,461	453	1,327,408	543,085
Grand Total Available for conversion	337,399	234,225	296,935	221,023	129,819	35,449	7,253	17,679	15,461	453	1,295,696	543,085

* Includes the volume in cedar and cedar-white fir merchantable pole stands.
** Includes some alpine fir.

Data as of 1937

RE-NRM
Forest Survey

Table 5 VOLUME OF SAWTIMBER IN SAWLOG STANDS BY TYPE, ZONE AND SPECIES
BENEWAH COUNTY, IDAHO

Timber Type	Volume by species - thousand board feet net log scale (Scribner Dec. C)											Pieces
	Western white pine	Ponderosa pine	Western larch	Douglas fir	White°° fir	Western red cedar	Western hemlock	Engelmann spruce	Lodgepole pine	Northern black cottonwood	Total	Cedar poles
	Zone 1											
Western white pine	310,481	22,721	149,629	90,813	70,144	20,567	5,654	8,156	4,690		682,855	441,518
Ponderosa pine-pure		85,224	5,176	6,056	377				596		97,429	
Ponderosa pine-mixed	6,011	130,933	35,455	56,335	12,158	247	382	5,361	1,455		248,337	16,908
Larch-Douglas fir	10,254	9,877	95,430	56,446	24,623	6,750	787	2,520	5,698		212,385	41,208
Hemlock-white fir			472	163	1,523			180	69		2,407	
Douglas fir	6	121	52	1,518	255						1,952	
Lodgepole pine			221		174			179	2,627		3,201	
Western red cedar°	1,678	660	5,765	3,711	3,407	3,436	273	336	178		19,444	35,197
Cedar-white fir°	1,162	100	2,117	2,713	10,554	3,778	15	947	136		21,522	7,310
Cottonwood										453	453	
Total	329,592	249,636	294,317	217,755	123,215	34,778	7,111	17,679	15,449	453	1,289,985	542,141
	Zone 2											
Western white pine	8,372	48	692	2,008	6,097	583	93				17,893	944
Ponderosa pine-mixed		4,947	1,606	1,499	421						8,473	
Larch-Douglas fir	132	441	3,798	1,332	472	88	49		12		6,324	
Douglas fir	43	201		3,152	43						3,439	
Total	8,547	5,637	6,096	7,991	7,033	671	142		12		36,129	944
	Zone 3											
Larch-Douglas fir			996	157	141						1,294	
Grand Total	338,139	255,273	301,409	225,903	130,389	35,449	7,253	17,679	15,461	453	1,327,408	543,085

° Includes the volume in merchantable pole stands.
°° Includes some alpine fir.

Data as of 1937

Table 6 CLASSIFICATION OF IMMATURE TIMBER TYPES ACCORDING TO DENSITY OF STOCKING
BENEWAH COUNTY, IDAHO

Timber° Type	Pole							
	Well Stocked		Medium Stocked		Poorly Stocked		Total	
	Acres	%	Acres	%	Acres	%	Acres	%
Western white pine	37,940	69	14,734	27	2,096	4	54,770	100
Ponderosa pine-mixed	10,138	21	21,954	47	15,012	32	47,104	100
Larch-Douglas fir	13,401	52	7,748	30	4,578	18	25,727	100
Hemlock-white fir			753	36	1,323	64	2,076	100
Douglas fir	664	22	2,034	67	353	11	3,051	100
Lodgepole pine	655	54	467	39	80	7	1,202	100
Western red cedar°°								
Cedar-white fir	448	8	3,989	71	1,211	21	5,648	100
Total	63,246	45	51,679	37	24,653	18	139,578	100

Timber° Type	Seedling and Sapling							
	Well Stocked		Medium Stocked		Poorly Stocked		Total	
	Acres	%	Acres	%	Acres	%	Acres	%
Western white pine	19,457	45	16,753	39	6,702	16	42,912	100
Ponderosa pine-mixed	1,673	8	11,910	54	8,252	38	21,835	100
Larch-Douglas fir	1,723	18	3,825	40	4,107	42	9,655	100
Hemlock-white fir	48	14	226	67	65	19	339	100
Douglas fir	253	81	60	19			313	100
Lodgepole pine	890	12	4,709	63	1,832	25	7,431	100
Western red cedar°°			245	24	786	76	1,031	100
Cedar-white fir			256				256	100
Total	24,044	29	37,984	45	21,744	26	83,772	100

Timber° Type	Total pole, seedling and sapling							
	Well Stocked		Medium Stocked		Poorly Stocked		Total	
	Acres	%	Acres	%	Acres	%	Acres	%
Western white pine	57,397	59	31,487	32	8,798	9	97,682	100
Ponderosa pine-mixed	11,811	17	33,864	49	23,264	34	68,939	100
Larch-Douglas fir	15,124	43	11,573	33	8,685	24	35,382	100
Hemlock-white fir	48	2	979	41	1,388	57	2,415	100
Douglas fir	917	27	2,094	62	353	11	3,364	100
Lodgepole pine	1,545	18	5,176	60	1,912	22	8,633	100
Western red cedar			245	24	786	76	1,031	100
Cedar-white fir	448	8	4,245	72	1,211	20	5,904	100
Total	87,290	39	89,663	40	46,397	21	223,350	100

° The cottonwood type is not classified as to stocking. Data as of 1937

°° Small poles (6 to 12 or 14 inches) included with seedling and sapling.

RE-NRM
Forest Survey

Table 7 CLASSIFICATION OF STOCKED TIMBERLANDS ACCORDING TO TYPE AND SITE QUALITY
BENEWAH COUNTY, IDAHO

Area in Acres

Timber° Type	Site number						Average site
	I	II	III	IV	V	Total area	
Western white pine	10,903	81,367	47,770	1,940		141,980	II
Ponderosa pine-pure			5,487	4,339		9,826	III & IV
Ponderosa pine-mixed		4,023	38,651	52,978	734	96,386	III & IV
Larch-Douglas fir	2,014	18,296	32,576	6,578	4	59,468	III
Hemlock-white fir	65	563	2,173			2,801	III
Douglas fir		1,407	2,090	795	7	4,299	III
Lodgepole pine	517	5,008	3,003	543		9,071	II & III
Western red cedar	402	1,220	2,044			3,666	II & III
Cedar-white fir	38	4,881	2,104	72		7,095	II
Total	13,939	116,765	135,898	67,245	745	334,592	

° The cottonwood type is not classified as to site.

Data as of 1937

RE-NRM
Forest Survey

Table 8 CLASSIFICATION OF STOCKED TIMBERLANDS ACCORDING TO TYPE AND AGE CLASS
ZONES ONE AND TWO
BENEWAH COUNTY, IDAHO

Area in Acres

Timber° Type	Age class - years						Total
	0-40	41-80	81-120	121-160	161-200	200+	
Western white pine	54,800	37,577	4,983	11,467	7,662	25,377	141,866
Ponderosa pine-pure		334	655	234	275	8,328	9,826
Ponderosa pine-mixed	30,051	27,443	11,527	751	373	26,241	96,386
Larch-Douglas fir	12,578	13,520	9,070	7,313	1,677	14,143	58,301
Hemlock-white fir	260	1,978	223			340	2,801
Douglas fir	636	1,785	920	947		11	4,299
Lodgepole pine	7,582	537	952				9,071
Western red cedar		459	622	14	509	2,062	3,666
Cedar-white fir	364	1,227	4,440	200	90	774	7,095
Total	106,271	84,860	33,392	20,926	10,586	77,276	333,311

° The cottonwood type is not classified as to age.

Data as of 1937

RE-NRM
Forest Survey

Table 9 AVERAGE ANNUAL CUTTING DEPLETION FROM THE GREEN TIMBER RESOURCES BY TREE SIZE, SPECIES AND PRODUCTS
BENEWAH COUNTY, IDAHO

Product	White pine	Ponderosa pine	Larch	Douglas fir	White fir	Cedar	Hemlock	Engelmann spruce	Lodgepole pine	Cottonwood	Total
From trees of sawtimber size (thousand board feet net log scale, Scribner Dec. C)											
Sawlogs 1/	36,138	20,284	5,390	5,296	2,706	305	6	437	1		70,563
Fuelwood 2/		271	566	1,952						128	2,917
Fence Posts 2/						154					154
Pulpwood 3/					2,109			394			2,503
Shingles 4/						159					159
Total	36,138	20,555	5,956	7,248	4,815	618	6	831	1	128	76,296
From trees of less than sawtimber size (cubic feet)											
Fuelwood 2/		2,408	24,338	83,936						2,494	113,176
Fence Posts 2/						3,702					3,702
Poles 5/						713,316					713,316
Piling 5/						5,812					5,812
Total		2,408	24,338	83,936		722,830				2,494	836,006

1/ 1925-1936 inclusive.
2/ From a special survey in 1935.
3/ 1927-1934 inclusive.
4/ 1925-1934 inclusive.
5/ 1927-1929-1931-1933.